



Use Attainability Analysis

for

WBID 1283 Elm Branch

Submitted by  
BWR

June 1, 2007

Submitted to:  
Missouri Department of Natural Resources  
Division of Environmental Quality  
Water Protection Program

## Field Data Sheets for Recreational Use Stream Surveys

### Data Sheet A - Water Body Identification

#### I. Water Body Information (For water body being surveyed)

Water Body Name (from USGS 7.5' quad):	Elm Branch
Missouri Water Body Identification (WBID) Number:	1283
8-digit HUC:	102 90108
County:	Pettis
Upstream Legal Description (from Table H):	MOUTH
Downstream Legal Description (from Table H):	12,43 N, 24 W
Number of sites evaluated	3
List all sites numbers, listed consequently upstream to downstream:	3, 2, 1

**Site Locations Map(s):** Attach a map of entire segment with assessment sites clearly labeled. Mark any other items that may be of interest.

#### II. Subsegmentation (fill this section out only in cases where subsegmentation is being proposed)

LOCATION COORDINATES (UNIVERSAL TRANSVERSE MERCATOR PROJECTION IN METERS)			
Upstream Coordinates:		Downstream Coordinates:	
UTM X	Y	UTM X	Y
HORIZONTAL COLLECTION METHOD (Indicate the method used to determine the locational data.)			
Global Positioning System (GPS)		Interpolation	
Static Mode		Topographic Map or DRG	
Dynamic Mode (Kinematic)		Aerial Photograph or DOQQ	
Precise Positioning Service		Satellite Imagery	
Signal Averaging		Interpolation Other	
Real Time Differential Processing			
HORIZONTAL ACCURACY ESTIMATE			
GPS Data Quality		Interpolation Data Quality	
FOM	± _____ Meters	Source Map Scale: 1:24,000 1:100,000 Other _____	
EPE	± _____ Feet or ± _____ Meters		
PDOP		± _____ Feet or ± _____ Meters	

#### III. Discharger Facility Information (list all permitted dischargers on the stream)

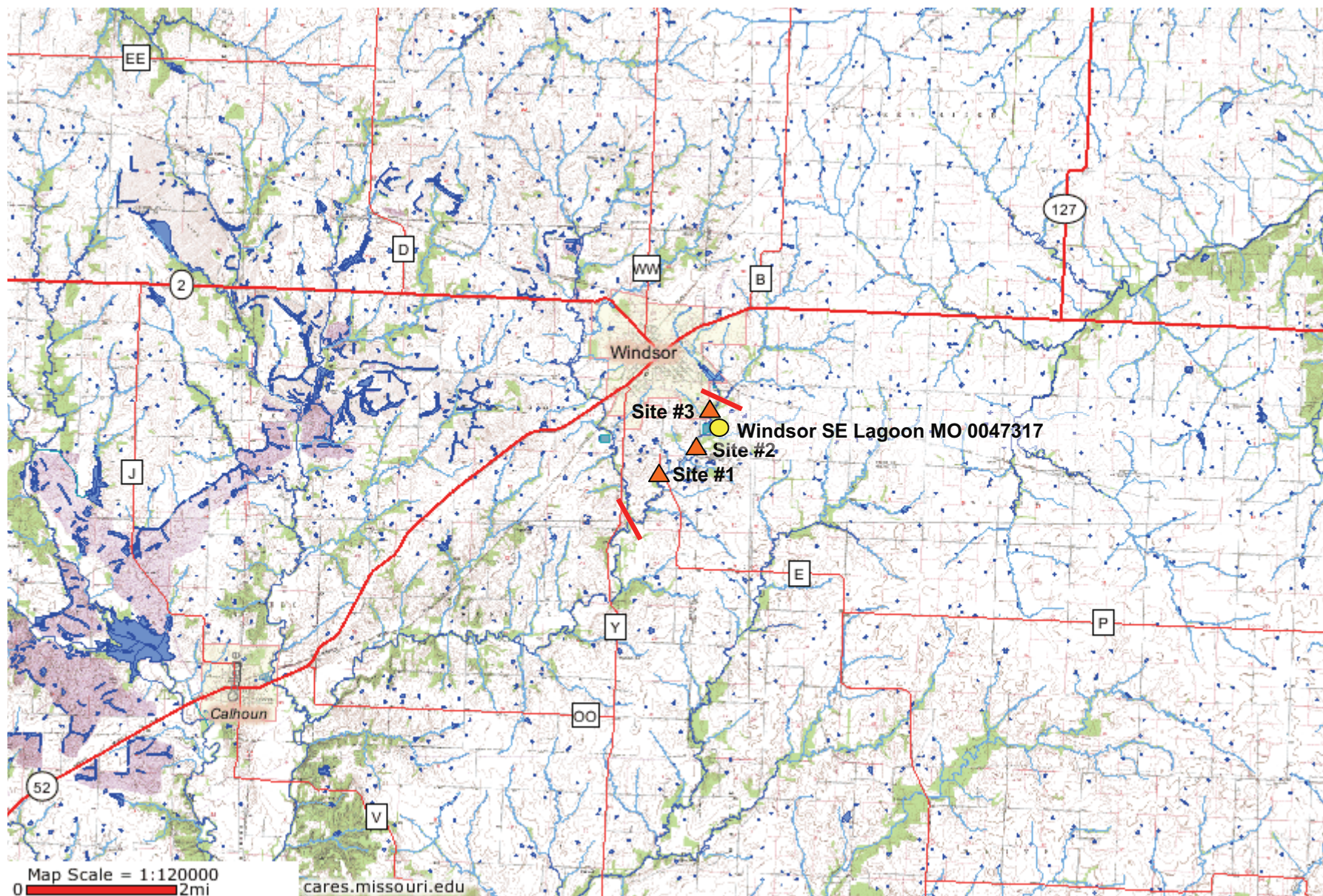
Discharger Facility Name(s):	Windsor SE Lagoon
Discharger Permit Number(s):	MO 0047317

#### IV. UAA Surveyor (please print legibly)

Name of Surveyor	Alan Mitchell	Telephone Number:	(816) 365-2645
Organization/Employer:	EAE		(913) 620-4310
Position:	Environmental Scientist		

Please verify that you have completed all sections, checked all applicable boxes and that everything is complete.

Signed: Alan Mitchell Date: May 17, 2007  
February 5, 2007 Page 22



Elm Branch  
WBID #1283



WBID# 1283  
 Site# 1

**Field Data Sheets for Recreational Use Stream Surveys**  
**Data Sheet B - Site Characterization**  
 (must be completed for each site)

Date & Time: <u>10:00am 5/17/07</u>	Site Location Description (e.g., road crossing):
Personnel (Data Collectors): <u>Alan Mitchell Tom Hall</u>	<u>Road Crossing - Bridge</u>
Current Weather Conditions: <u>Clear</u>	Facility Name: <u>Windsor SE Lagoon</u>
Weather Conditions for Past 10 days:	Permit Number: <u>MD0047317</u>
Drought Conditions?: No drought <input checked="" type="checkbox"/> ; Phase I <input type="checkbox"/> ; Phase II <input type="checkbox"/> ; Phase III <input type="checkbox"/> ; Phase IV <input type="checkbox"/> ; Unknown <input type="checkbox"/>	

**Site Locations:**

<b>LOCATION COORDINATES (UNIVERSAL TRANSVERSE MERCATOR PROJECTION, IN METERS)</b>	
Site GPS Coordinates: UTM X: <u>93252079</u> W	Y: <u>3850920</u> N
<b>HORIZONTAL COLLECTION METHOD</b> (Indicate the method used to determine the locational data.)	
<b>Global Positioning System (GPS)</b>	<b>Interpolation</b>
Static Mode	Topographic Map or DRG
Dynamic Mode (Kinematic)	Aerial Photograph or DOQQ
Precise Positioning Service	Satellite Imagery
Signal Averaging	Interpolation Other
Real Time Differential Processing	
<b>HORIZONTAL ACCURACY ESTIMATE</b>	
<b>GPS Data Quality</b>	<b>Interpolation Data Quality</b>
FOM ± _____ Meters	Source Map Scale: 1:24,000 1:100,000 Other _____
EPE ± _____ Feet or ± _____ Meters	± _____ Feet or ± _____ Meters
PDOP	

**Photos:**

Upstream Photos		Downstream Photos		Other Photos	
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
<u>1</u>		<u>2</u>			

**Uses Observed\*:** (Uses actually observed at time of survey.)

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:

Describe: (Include number of individuals recreating, photo-documentation of evidence of recreational uses, etc. Use *Data Sheet D- Recreational Use Interview* when conducting interviews.)

**Surrounding Conditions\*:** (Mark all that promote or impede recreational uses. Attach photos of evidence or unusual items of interest.)

<input type="checkbox"/> City/county parks	<input type="checkbox"/> Playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input type="checkbox"/> Campgrounds
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Fence	<input checked="" type="checkbox"/> Steep slopes	<input type="checkbox"/> None of the above	<input checked="" type="checkbox"/> Other: <u>Farm</u>

Comments:

**Indications of Human Use\*:** (attach photos)

<input checked="" type="checkbox"/> Roads	<input type="checkbox"/> Rope swings	<input type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Livestock Watering	<input type="checkbox"/> RV / ATV Tracks
<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Other:	

Comments: No significant signs of human use



RUN - 100%

**Stream Morphology:**

**Upstream View's Physical Dimensions:** Is there any water present at this view? ☒ Yes ☐ No

If so, is there an obvious current? ☒ Yes ☐ No

**Select one of the following channel features:**

Channel Feature	Distance from access (m)	Width (m)	Length (m)	Median Depth (m)	Max. Depth (m)
RIFPLE					
RUN	10	8	∞	0.5	0.7
POOL					

**Downstream View's Physical Dimensions:** Is there any water present at this view? ☒ Yes ☐ No

If so, is there an obvious current? ☐ Yes ☐ No

**Select one of the following channel features:**

Channel Feature	Distance from access (m)	Width (m)	Length (m)	Median Depth (m)	Max. Depth (m)
RIFPLE					
RUN					
POOL					

**Substrate\*:** (These values should add up to 100%.)

0 % Cobble	0 % Gravel	1 % Sand	90 % Silt	9 % Mud/Clay	0 % Bedrock
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**Aquatic Vegetation\*:** (Note amount of vegetation or algal growth at the assessment site)

**Water Characteristics\*:** (Mark all that apply.)

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input type="checkbox"/> Clear	<input checked="" type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other:
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input checked="" type="checkbox"/> Fine sediments	<input type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:

**Comments:** Please attach any additional comments () to this form.

\*This information is not to be used solely for removal of a recreational use designation but rather is to provide a more comprehensive understanding of water conditions. Consequently, this information is not intended to directly influence a decision on the recreation use analysis but may point to conditions that need further analysis or that effect another use.

Please verify that you have completed all sections, checked all applicable boxes and that everything is complete.

Surveyor's Signature: Steve Mitchell Date of Survey: May 17, 2007

Organization: EAE, Inc. Position: Env. Eng.

## Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

1283 #1

	Distance from Stream edge	Depth	Rank	Assigned Rank (Riffle, Run, or Pool?)	Sorted depth	Photo
T <sub>A</sub>	Wetted width =	0.1		1 Run		1) Upstream
	8 m	0.5		2		2) Downstream
		0.6		3		
		0.6		4 DO = 4.30 10 <sup>10</sup> °		
		0.7		5 45 ppm		
		0.6		6		
		0.5		7		
		0.4		8		
		0.2		9		
		0.1		10		
T <sub>B</sub>	8 m Width	0.05		11		
		0.3		12		
		0.5		13		
		0.8		14	16.10°	
		1.0+		15	4.8 %	
		1.0+		16	4.7 ppm	
		1.0+		17		
		0.9		18		
		0.7		19		
		0.4		20		
T <sub>C</sub>	9 m Width	0.05		21		
		0.4		22 16.2°	5.2 ppm	
		1.0		23 53%		
		1.0+		24		
		1.0+		25		
		1.0+		26		
		1.0+		.		
		1.0+		.		
		1.0		.		
		0.05		n		

If there is an odd number of entries find middle rank  $[(n+1)/2]$ . The corresponding sorted value depth to the middle rank is the median depth.

If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: Mark W. Wickham Date: May 17, 2007

Organization: EAE, Inc. Position: Env. Eng.

## Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

1283 #1

	Distance from Stream edge	Depth	Rank	Assigned Rank	Sorted depth
T <sub>D</sub> L to R	8 m Width	0		1	16.5°
		0.1		2	55%
		0.2		3	5.3 ppm
		0.3		4	
		0.4		5	
		0.4		6	
		0.3		7	
		0.2		8	
		0.2		9	
		0.4		10	
T <sub>E</sub> L to R	10 m Width	0.05		11	
		0.5		12	16.4°
		1.0		13	55%
		1.0+		14	5.4 ppm
		1.0+		15	
		1.0+		16	
		1.0+		17	
		0.4		18	
		0.4		19	
		0.05		20	
T <sub>F</sub> L to R	5.5 m width	0.10		21	
		0.3		22	16.5°
		0.4		23	59%
		0.4		24	5.5 ppm
		0.5		25	
		0.7		26	
		0.7		.	
		0.7		.	
		0.6		.	
		0.5		n	

If there is an odd number of entries find middle rank  $[(n+1)/2]$ . The corresponding sorted value depth to the middle rank is the median depth.

If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: Andrew J. StettinDate: May 17, 2007Organization: EAE, Inc.Position: Env. Engr.

## Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

1293 #1

	Distance from Stream edge	Depth	Rank	Assigned Rank	Sorted depth
T <sub>G</sub>	6 m width	0.05		1	
		0.1		2	16.7°
		0.3		3	60%
		0.5		4	5.7 ppm
		0.6		5	
		0.6		6	
		0.6		7	
		0.6		8	
		0.4		9	
		0.1		10	
T <sub>H</sub>	5 m width	0.05		11	
		0.10		12	16.7°
		0.2		13	60%
		0.4		14	5.8 ppm
		0.6		15	
		0.6		16	
		0.5		17	
		0.4		18	
		0.3		19	
		0.10		20	
T <sub>I</sub>	4 m width	0.05		21	
		0.10		22	16.7°
		0.2		23	63%
		0.2		24	6.0 ppm
		0.3		25	
		0.3		26	
		0.2		.	
		0.2		.	
		0.1		.	
		0.05		n	

If there is an odd number of entries find middle rank  $[(n+1)/2]$ . The corresponding sorted value depth to the middle rank is the median depth.

If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: Steve M. MitchellDate: May 17, 2007Organization: EAE, Inc.Position: Env. Engr.



## Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

1283 #1

T<sub>J</sub>

	Distance from Stream edge	Depth	Rank	Assigned Rank	Sorted depth
1	5m width	0.05		1	16.7°
2		0.10		2	62%
3		0.2		3	5.9 ppm
4		0.2		4	
5		0.2		5	
6		0.2		6	
7		0.1		7	
8		0.1		8	
9		0.05		9	
10		0.05		10	
1	5m width	0.1		11	
2		0.3		12	16.8°
3		0.5		13	60%
4		0.6		14	5.7 ppm
5		0.6		15	
6		0.6		16	
7		0.6		17	
8		0.6		18	
9		0.5		19	
10		0.3		20	
				21	
				22	
				23	
				24	
				25	
				26	
				.	
				.	
				.	
				n	
				.	
				.	

T<sub>K</sub>

If there is an odd number of entries find middle rank  $[(n+1)/2]$ . The corresponding sorted value depth to the middle rank is the median depth.

If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: Mark MitchellDate: May 17, 2007Organization: EAE, Inc.Position: Env. Engr

WBID# 1203  
 Site# 2

**Field Data Sheets for Recreational Use Stream Surveys**  
**Data Sheet B - Site Characterization**  
 (must be completed for each site)

Date & Time: <u>1:00pm 5/17/07</u>	Site Location Description (c.g., road crossing):
Personnel (Data Collectors): <u>Alan Mitchell Tom Holloway</u>	Bridge
Current Weather Conditions: <u>Clear</u>	Facility Name: <u>WINDSOR SE Lagoon</u>
Weather Conditions for Past 10 days:	Permit Number: <u>MO004731T</u>
Drought Conditions?: No drought <input checked="" type="checkbox"/> ; Phase I <input type="checkbox"/> ; Phase II <input type="checkbox"/> ; Phase III <input type="checkbox"/> ; Phase IV <input type="checkbox"/> ; Unknown <input type="checkbox"/>	

**Site Locations:**

Zone 14

<b>LOCATION COORDINATES (UNIVERSAL TRANSVERSE MERCATOR PROJECTION, IN METERS)</b>	
Site GPS Coordinates: UTM X: <u>93.52159°W</u>	Y: <u>38.50877°N</u>
<b>HORIZONTAL COLLECTION METHOD</b> (Indicate the method used to determine the locational data.)	
<b>Global Positioning System (GPS)</b>	<b>Interpolation</b>
Static Mode	Topographic Map or DRG
Dynamic Mode (Kinematic)	Aerial Photograph or DOQQ
Precise Positioning Service	Satellite Imagery
Signal Averaging	Interpolation Other
Real Time Differential Processing	
<b>HORIZONTAL ACCURACY ESTIMATE</b>	
<b>GPS Data Quality</b>	<b>Interpolation Data Quality</b>
FOM ± _____ Meters	Source Map Scale: 1:24,000 1:100,000 Other _____ ± _____ Feet or ± _____ Meters
EPE ± _____ Feet or ± _____ Meters	
PDOP	

**Photos:**

Upstream Photos		Downstream Photos		Other Photos	
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
<u>3</u>	<u>to show upstream</u>	<u>4</u>	<u>to show downstream</u>		

**Uses Observed\*:** (Uses actually observed at time of survey.)

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:

Describe: (Include number of individuals recreating, photo-documentation of evidence of recreational uses, etc. Use Data Sheet D- Recreational Use Interview when conducting interviews.)

**Surrounding Conditions\*:** (Mark all that promote or impede recreational uses. Attach photos of evidence or unusual items of interest.)

<input type="checkbox"/> City/county parks	<input type="checkbox"/> Playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input type="checkbox"/> Campgrounds
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> No trespass sign	<input checked="" type="checkbox"/> Fence	<input type="checkbox"/> Steep slopes	<input type="checkbox"/> None of the above	<input checked="" type="checkbox"/> Other: <u>Farm</u>

Comments:

**Indications of Human Use\*:** (attach photos)

<input type="checkbox"/> Roads	<input type="checkbox"/> Rope swings	<input type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Livestock Watering	<input type="checkbox"/> RV / ATV Tracks
<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Other:	

Comments: No significant signs of human use

Channel Feature:

RUN  
RIFPLE  
Pool

\* Page Two – Data Sheet B for WBID # 1283 : #2

**Stream Morphology:**

**Upstream View's Physical Dimensions:** Is there any water present at this view? ☒ Yes ☐ No

If so, is there an obvious current? ☒ Yes ☐ No

**Select one of the following channel features:**

Channel Feature	Distance from access (m)	Width (m)	Length (m)	Median Depth (m)	Max. Depth (m)
RIFPLE					
RUN	100 m	8 m	∞	0.5	1.0
POOL					

**Downstream View's Physical Dimensions:** Is there any water present at this view? ☒ Yes ☐ No

If so, is there an obvious current? ☒ Yes ☐ No

**Select one of the following channel features:**

Channel Feature	Distance from access (m)	Width (m)	Length (m)	Median Depth (m)	Max. Depth (m)
RIFPLE					
RUN	200 m	8 m	∞	0.5	1.0
POOL					

**Substrate\*:** (These values should add up to 100%.)

<input type="checkbox"/> % Cobble	<input type="checkbox"/> % Gravel	<input type="checkbox"/> % Sand	<input checked="" type="checkbox"/> 50 % Silt	<input checked="" type="checkbox"/> 50 % Mud/Clay	<input type="checkbox"/> % Bedrock
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**Aquatic Vegetation\*:** (Note amount of vegetation or algal growth at the assessment site)

little or none

**Water Characteristics\*:** (Mark all that apply.)

Odor:	<input type="checkbox"/> Sewage	<input checked="" type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input type="checkbox"/> Clear	<input checked="" type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other:
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input checked="" type="checkbox"/> Fine sediments	<input type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:

**Comments:** Please attach any additional comments () to this form.

\*This information is not to be used solely for removal of a recreational use designation but rather is to provide a more comprehensive understanding of water conditions. Consequently, this information is not intended to directly influence a decision on the recreation use analysis but may point to conditions that need further analysis or that effect another use.

Please verify that you have completed all sections, checked all applicable boxes and that everything is complete.

Surveyor's Signature: David Mitchell Date of Survey: May 17, 2007

Organization: EAE, Inc. Position: Env. Eng.

## Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

1283 #2

	Distance from Stream edge	Depth	Rank	Assigned Rank (Riffle, Run, or Pool?)	Sorted depth
T <sub>A</sub>	1 Wetted width =	0.05		1	
	2 5 m	0.2		2	
	3	0.4		3	182°
	4	0.6		4	DD = 5.6 ppm
	5	1.0		5	60 %
	6	0.7		6	
	7	0.6		7	
	8	0.4		8	
	9	0.2		9	
	10	0.10		10	
T <sub>B</sub>	1 5m Width	0.05		11	
	2	0.3		12	183°
	3	0.6		13	61%
	4	0.6		14	5.6 ppm
	5	0.5		15	
	6	0.4		16	
	7	0.2		17	
	8	0.2		18	
	9	0.1		19	
	10	0.05		20	
T <sub>C</sub>	1 7.5m Width	0.05		21	
	2	0.1		22	171°
	3	0.3		23	60%
	4	0.6		24	5.8 ppm
	5	0.8		25	56
	6	0.7		26	
	7	0.7		.	
	8	0.6		.	
	9	0.4		.	
	10	0.1		n	

If there is an odd number of entries find middle rank  $[(n+1)/2]$ . The corresponding sorted value depth to the middle rank is the median depth.

If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: Alan W. M. J. J. J. Date: 5/17/2007

Organization: EAE, Inc. Position: Environmental Engineer

## Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

1283 #2

	Distance from Stream edge	Depth	Rank	Assigned Rank	Sorted depth
T <sub>D</sub>	5 <sup>2</sup> m	0.05		1	
		0.1		2	18°
		0.2		3	<del>64%</del> 63%
		0.3		4	6.0 ppm
		0.4		5	
		0.4		6	
		0.4		7	
		0.3		8	
		0.3		9	
		0.05		10	
T <sub>E</sub>		0.05		11	
		0.05		12	18°
		0.2		13	62%
		0.3		14	6.0 ppm
		0.5		15	
		0.7		16	
		0.7		17	
		0.4		18	
		0.0		19	
		0.05		20	
T <sub>F</sub>		0.1		21	
		0.2		22	17.9°
		0.3		23	70%
		0.4		24	6.2 ppm
		0.4		25	
		0.3		26	
		0.2		.	
		0.1		.	
		0.1		.	
		0.05		n	

If there is an odd number of entries find middle rank  $[(n+1)/2]$ . The corresponding sorted value depth to the middle rank is the median depth.

If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: Alan W. Mitchell Date: 5/17/2007

Organization: EAE, Inc. Position: Environmental Engineer

## Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

1283 #2

	Distance from Stream edge	Depth	Rank	Assigned Rank	Sorted depth
T <sub>G</sub>	9m Width	0.1		1	18.1°
		0.3		2	69.67%
		0.5		3	6.2 ppm
		0.6		4	6.1 ppm
		0.6		5	
		0.6		6	
		0.5		7	
		0.4		8	
		0.05		9	
		0.05		10	
T <sub>H</sub>	8m Width	0.05		11	
		0.3		12	18° 17.9
		0.4		13	69%
		0.4		14	6.5 ppm
		0.3		15	
		0.4		16	
		0.4		17	
		0.3		18	
		0.2		19	
		0.05		20	
T <sub>I</sub>	8m Width	0.1		21	
		0.3		22	18.1°
		0.3		23	62%
		0.3		24	6.2 ppm
		0.5		25	
		0.5		26	
		0.4		.	
		0.3		.	
		0.2		.	
		0.2		n	

If there is an odd number of entries find middle rank  $[(n+1)/2]$ . The corresponding sorted value depth to the middle rank is the median depth.

If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: Shirley StilesDate: May 17, 2007Organization: EAE, Inc.Position: Env. Eng.



## Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

1293 #L

T<sub>J</sub>

	Distance from Stream edge	Depth	Rank	Assigned Rank	Sorted depth
1	8m Width	0.1		1	18.2°
2		0.3		2	70%
3		0.4		3	10.5 ppm
4		0.5		4	
5		0.7		5	
6		0.7		6	
7		0.5		7	
8		0.3		8	
9		0.2		9	
10		0.2		10	
1	8m Width	0.1		11	18.5°
2		0.3		12	75%
3		0.4		13	7.0 ppm
4		0.5		14	
5		0.5		15	
6		0.5		16	
7		0.5		17	
8		<del>0.3</del> 0.4		18	
9		0.3		19	
10		0.05		20	
				21	
				22	
				23	
				24	
				25	
				26	
				.	
				.	
				.	
				n	
				.	
				.	

T<sub>K</sub>

If there is an odd number of entries find middle rank  $[(n+1)/2]$ . The corresponding sorted value depth to the middle rank is the median depth.

If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: Alvin W. McNeillDate: 5/17/2007Organization: EAE, Inc.Position: Environmental Engineer

WBID# 1283  
 Site# 3

**Field Data Sheets for Recreational Use Stream Surveys**  
**Data Sheet B - Site Characterization**  
 (must be completed for each site)

Date & Time: <u>4:00pm 5/17/07</u>	Site Location Description (c.g., road crossing):
Personnel (Data Collectors): <u>Alan Mitchell Tom Holloway</u>	<u>Farm Field</u>
Current Weather Conditions: <u>Clear</u>	Facility Name: <u>Wimsor SE Lagoon</u>
Weather Conditions for Past 10 days:	Permit Number: <u>MD0047317</u>
Drought Conditions?: No drought <input checked="" type="checkbox"/> ; Phase I <input type="checkbox"/> ; Phase II <input type="checkbox"/> ; Phase III <input type="checkbox"/> ; Phase IV <input type="checkbox"/> ; Unknown <input type="checkbox"/>	

**Site Locations:**

<b>LOCATION COORDINATES (UNIVERSAL TRANSVERSE MERCATOR PROJECTION, IN METERS)</b>	
Site GPS Coordinates: UTM X: <u>93.52173° W</u>	Y: <u>38.50529° N</u>
<b>HORIZONTAL COLLECTION METHOD (Indicate the method used to determine the locational data.)</b>	
<b>Global Positioning System (GPS)</b>	<b>Interpolation</b>
Static Mode	Topographic Map or DRG
Dynamic Mode (Kinematic)	Aerial Photograph or DOQQ
Precise Positioning Service	Satellite Imagery
Signal Averaging	Interpolation Other
Real Time Differential Processing	
<b>HORIZONTAL ACCURACY ESTIMATE</b>	
<b>GPS Data Quality</b>	<b>Interpolation Data Quality</b>
FOM ± _____ Meters	Source Map Scale: 1:24,000 1:100,000 Other _____ ± _____ Feet or ± _____ Meters
EPE ± _____ Feet or ± _____ Meters	
PDOP	

**Photos:**

Upstream Photos		Downstream Photos		Other Photos	
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
<u>6</u>	<u>to show upstream</u>	<u>5</u>	<u>to show downstream</u>		

**Uses Observed\*:** (Uses actually observed at time of survey.)

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:

Describe: (Include number of individuals recreating, photo-documentation of evidence of recreational uses, etc. Use Data Sheet D- Recreational Use Interview when conducting interviews.)

**Surrounding Conditions\*:** (Mark all that promote or impede recreational uses. Attach photos of evidence or unusual items of interest.)

<input type="checkbox"/> City/county parks	<input type="checkbox"/> Playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input type="checkbox"/> Campgrounds
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Fence	<input type="checkbox"/> Steep slopes	<input checked="" type="checkbox"/> None of the above	<input checked="" type="checkbox"/> Other: <u>Farm</u>

Comments:

**Indications of Human Use\*:** (attach photos)

<input type="checkbox"/> Roads	<input type="checkbox"/> Rope swings	<input type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Livestock Watering	<input type="checkbox"/> RV / ATV Tracks
<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Other:	

Comments: No human use besides farming

**\* Page Two – Data Sheet B for WBID # 1283 : #3**

**Stream Morphology:**

**Upstream View's Physical Dimensions:** Is there any water present at this view? ☒ Yes ☐ No

If so, is there an obvious current? ☒ Yes ☐ No

**Select one of the following channel features:**

Channel Feature	Distance from access (m)	Width (m)	Length (m)	Median Depth (m)	Max. Depth (m)
RIFFLE					
RUN	100	7.0		0.6	1.0
POOL					

**Downstream View's Physical Dimensions:** Is there any water present at this view? ☐ Yes ☐ No

If so, is there an obvious current? ☐ Yes ☐ No

**Select one of the following channel features:**

Channel Feature	Distance from access (m)	Width (m)	Length (m)	Median Depth (m)	Max. Depth (m)
RIFFLE					
RUN	200	7.0		0.1	0.1
POOL					

**Substrate\*:** (These values should add up to 100%.)

0 % Cobble	0 % Gravel	0 % Sand	50 % Silt	50 % Mud/Clay	0 % Bedrock
------------	------------	----------	-----------	---------------	-------------

**Aquatic Vegetation\*:** (Note amount of vegetation or algal growth at the assessment site)

*Virtually none*

**Water Characteristics\*:** (Mark all that apply.)

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input type="checkbox"/> Clear	<input checked="" type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other:
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input checked="" type="checkbox"/> Fine sediments	<input type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:

**Comments:** Please attach any additional comments () to this form.

\*This information is not to be used solely for removal of a recreational use designation but rather is to provide a more comprehensive understanding of water conditions. Consequently, this information is not intended to directly influence a decision on the recreation use analysis but may point to conditions that need further analysis or that effect another use.

Please verify that you have completed all sections, checked all applicable boxes and that everything is complete.

Surveyor's Signature: *Alfred Mitchell* Date of Survey: 5/17/2007

Organization: EAE, Inc. Position: Environmental Engineer

## Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

1283 #3

T<sub>A</sub>

	Distance from Stream edge	Depth	Rank	Assigned Rank (Riffle, Run, or Pool?)	Sorted depth
1	Wetted width =	0.05		1	
2	4 m	0.3		2	
3		0.3		3	19.1°
4		0.7		4 DO =	5.6 ppm,
5		0.7		5	58.5 %
6		1.0		6	
7		1.0		7	
8		.8		8	
9		.8		9	
10		.5		10	

T<sub>B</sub>

1	3 m Width	0.05		11	
2		0.1		12	19.1°
3		0.2		13	70 %
4		0.3		14	6.4 ppm
5		0.4		15	
6		0.3		16	
7		0.2		17	
8		0.2		18	
9		0.1		19	
10		0.05		20	

T<sub>C</sub>

1	5 m Width	0.05		21	
2		0.05		22	19.4°
3		0.1		23	74.5 %
4		0.1		24	6.8 ppm
5		0.2		25	
6		0.2		26	
7		0.3		.	
8		0.3		.	
9		0.2		.	
10		0.1		n	
				.	
				.	

If there is an odd number of entries find middle rank  $[(n+1)/2]$ . The corresponding sorted value depth to the middle rank is the median depth.

If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: John D. MitchellDate: May 17, 2007Organization: EAE, Inc.Position: Env. Eng.

## Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

1283 #3

	Distance from Stream edge	Depth	Rank	Assigned Rank	Sorted depth
T D	3m width	0.05		1	19.6°
		0.1		2	73.5%
		0.2		3	6.7 ppm
		0.2		4	6.6
		0.2		5	
		0.2		6	
		0.2		7	
		0.2		8	
		0.1		9	
		0.05		10	
E	5m width	0.05		11	
		0.1		12	19.8°
		0.2		13	74%
		0.1		14	6.7 ppm
		0.1		15	
		0.1		16	
		0.1		17	
		0.1		18	
		0.1		19	
		0.1		20	
F	5m width	0.05		21	
		0.05		22	19.7°
		0.1		23	74%
		0.2		24	6.7 ppm
		0.3		25	
		0.4		26	
		0.5		.	
		0.7		.	
		0.6		.	
		0.5		n	

If there is an odd number of entries find middle rank  $[(n+1)/2]$ . The corresponding sorted value depth to the middle rank is the median depth.

If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: Robert M. McMillanDate: May, 17, 2007Organization: EAE, Inc.Position: Env. Engineer

## Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

1283 #3

	Distance from Stream edge	Depth	Rank	Assigned Rank	Sorted depth
T <sub>G</sub>	4 m Width	0.05		1	20°
		0.05		2	80%
		0.1		3	7.1 ppm
		0.1		4	
		0.05		5	
		0.1		6	
		0.1		7	
		0.05		8	
		0.05		9	
		0.05		10	
T <sub>H</sub>	2 m Width	0.05		11	20°
		0.05		12	80%
		0.05		13	7.2 ppm
		0.1		14	
		0.1		15	
		0.1		16	
		0.1		17	
		0.1		18	
		0.05		19	
		0.05		20	
T <sub>I</sub>	5 m Width	0.05		21	20°
		0.05		22	77%
		0.1		23	6.9 ppm
		0.1		24	
		0.2		25	
		0.2		26	
		0.1		.	
		0.1		.	
		0.1		.	
		0.1		n	

Pool

If there is an odd number of entries find middle rank  $[(n+1)/2]$ . The corresponding sorted value depth to the middle rank is the median depth.

If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: W.D. Mitchell Date: May 17, 2007

Organization: EAE, Inc. Position: Eun-Eun



## Data Sheet C – Cross-Sectional Depth Measurements (for estimation of median depth)

1287 #3

	Distance from Stream edge	Depth	Rank	Assigned Rank	Sorted depth
T <sub>J</sub> 1	5 m Width	0.3		1	77.5%
2		0.4		2	70.2°
3		0.5		3	6.8 ppm
4		0.5		4	
5		0.5		5	
6		0.6		6	
7		0.5		7	
8		0.4		8	
9		0.1		9	
10		0.05		10	
<hr/>					
T <sub>K</sub> 1	2.5 m Width	0.05		11	
2		0.05		12	20.2°
3		0.1		13	78%
4		0.2		14	7.0 ppm
5		0.3		15	
6		0.3		16	
7		0.2		17	
8		0.2		18	
9		0.1		19	
10		0.1		20	
				21	
				22	
				23	
				24	
				25	
				26	
				.	
				.	
				.	
				n	
				.	
				.	

Pool

If there is an odd number of entries find middle rank  $[(n+1)/2]$ . The corresponding sorted value depth to the middle rank is the median depth.

If there is an even number of entries, the median depth corresponds to the arithmetic average of the two depth values surrounding the middle rank.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: Mace W. Mitchell Date: 5/17/2007

Organization: EAE, Inc. Position: Environmental Engineer





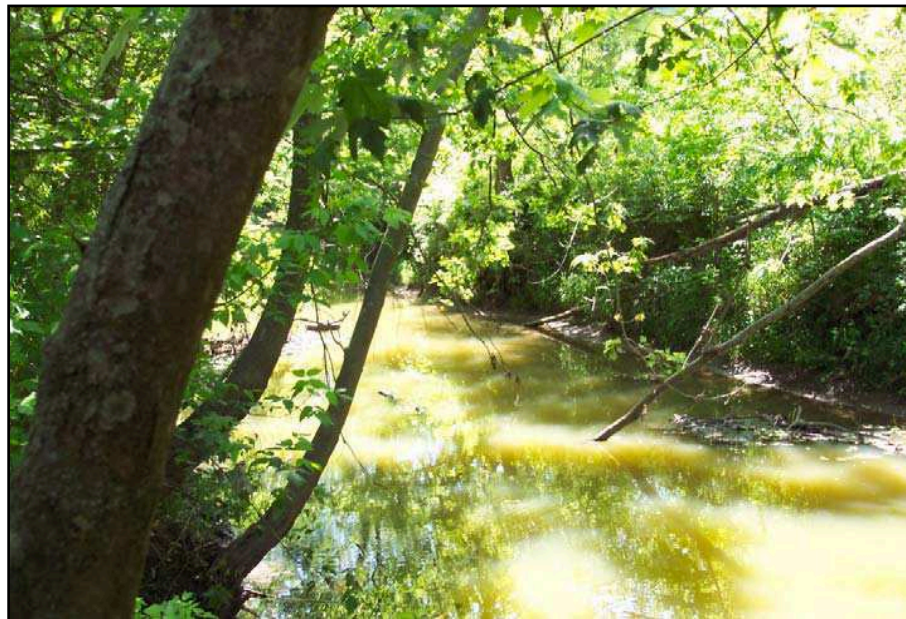
Upstream (Site 1) of Elm Branch



Downstream (Site 1) of Elm Branch



Upstream (Site 2) of Elm Branch



Downstream (Site 2) of Elm Branch





Upstream (Site 3) of Elm Branch



Downstream (Site 3) of Elm Branch

**Field Data Sheet for Recreational Use Stream Survey**

**Data Sheet D—Recreational Use Interview**

**Stream Name** ELM BRANCH **(WBID #** 1283 **)**

**I. Introduction**

**Date & Time** (include AM or PM): 5-05-07 4:00pm

**Interviewed:** ☒ In person ☐ By phone ☐ By mail

(NOTE: If you are an Interviewee filling out this form to mail back to DNR, proceed to Question #1.)

**Interviewee selected because** (e.g., house next to stream; standing by stream, etc.) \_\_\_\_\_

**Interviewer introduction to Interviewee:** "My name is \_\_\_\_\_, I work for \_\_\_\_\_ (name of your employer), and I am collecting information on how people use \_\_\_\_\_ (name of the stream)."

**ASK:**

1.) Are you willing to respond to a survey about this stream? (It will just take a few minutes.)

☐ Yes ☐ No

If yes, list contact information for the interviewee below:

Legal name: GARY HAMITER

Current mailing address: 1135 N.E. 1301 RD WINDSOR 65360

Daytime phone number: (660) 647-5906

E-mail address (optional): \_\_\_\_\_

2.a.) Do you live in this area? ☒ Yes ☐ No

If yes, how many years? 20+

2.b.) If you don't live nearby, are you still familiar with this stream? ☐ Yes ☐ No

If yes, how many years?

If no, thank the individual for taking the time to talk to you and conclude the interview.

3.) Are you familiar with this particular stretch of the stream? (show them the map, pointing out local landmarks such as roads, bridges, property lines) ☒ Yes ☐ No

If yes, proceed to "II. Personal Use?".

If no, proceed to Section V.

**II. Personal Use?**

1.) Have you or your family personally used the stream for recreation since November 28, 1975?

☐ Yes ☒ No

If yes, proceed to #3.

If no, proceed to #2.

2.a.) List reasons stream not used.

Lagoon - Lagoon is E. of this Property

2.b.) Proceed to "III. Witnessed Use?".

3.) How do you use the stream?

Whole Body Contact Recreation			
Swimming <input type="checkbox"/>	Tubing <input type="checkbox"/>	Snorkeling/Skin Diving <input type="checkbox"/>	Water Skiing <input type="checkbox"/>

**If Interviewee (or family) used the stream for WBCR since Nov. 28, 1975, ask:**

4.a.) When (e.g., year(s)?; season?; only after a rain?) and how often (times/year)? \_\_\_\_\_

4.b.) Where, exactly? Describe specific location *and mark on the map* (See map requirements in the protocol). \_\_\_\_\_

Secondary Contact Recreation			
Fishing <input type="checkbox"/>	Wading <input type="checkbox"/>	Boating <input type="checkbox"/>	Trapping <input type="checkbox"/> Other: <input type="checkbox"/> List: _____

**If Interviewee (or family) used the stream for SCR since Nov. 28, 1975, ask:**

4.c.) When (e.g., year(s)?; season?; only after a rain?) and how often (times/year)? \_\_\_\_\_

4.d.) Where, exactly? Describe specific location *and mark on the map* (See map requirements in the protocol). \_\_\_\_\_

### **III. Witnessed Use?**

1.) Have you observed others using this stream for recreation since Nov. 28, 1975? ☐ Yes ☐ No

If yes, proceed to #2.

If no, proceed to, "IV. Anecdotal Use?".

2.) What kinds of uses have you witnessed?

Whole Body Contact Recreation			
Swimming <input type="checkbox"/>	Tubing <input type="checkbox"/>	Snorkeling/Skin Diving <input type="checkbox"/>	Water Skiing <input type="checkbox"/>

**If Interviewee witnessed WBCR use since Nov. 28, 1975, ask the following questions:**

2.a.) When (e.g., year(s)?; season?; only after a rain?) and how often (times/year)? \_\_\_\_\_

2.b.) Where, exactly? Describe specific location *and mark on the map* (Seemap requirements in the protocol). \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### Secondary Contact Recreation

Fishing ☐ Wading ☐ Boating ☐ Trapping ☐ Other: ☐ List: \_\_\_\_\_

If Interviewee witnessed SCR use since Nov. 28, 1975, ask the following questions:

2.c.) When (e.g., year(s)?; season?; only after a rain?) and how often (times/year)? \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2.d.) Where, exactly? Describe specific location *and mark on the map* (Seemap requirements in the protocol). \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### IV. Anecdotal Use?

1.) Have you heard about anyone using this stream since Nov. 28, 1975 for recreation – not seen or done yourself, but just heard about it? ☐ Yes ☒ No

If yes, proceed to #2.

If no, thank the individual for taking the time to talk to you and conclude the interview.

2.) What kind of uses have you heard about?

### Whole Body Contact Recreation

Swimming ☐ Tubing ☐ Snorkeling/Skin Diving ☐ Water Skiing ☐

If Interviewee heard of WBCR use since Nov. 28, 1975, ask the following questions:

2.a.) When did these uses take place (e.g., year(s)?; season?; only after a rain?) and how often (times/year)? \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2.b.) Where, exactly? Describe specific location *and mark on the map* (See map requirements in the protocol). \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



### Secondary Contact Recreation

Fishing ☐ Wading ☐ Boating ☐ Trapping ☐ Other: ☐ List:

If Interviewee heard of SCR use since Nov. 28, 1975, ask the following questions:

2.c.) When did these uses take place (e.g., year(s)?; season?; only after a rain?) and how often (times/year)? \_\_\_\_\_

2.d.) Where, exactly? Describe specific location *and mark on the* (See map requirements in the protocol). \_\_\_\_\_

#### V. Others to Contact?

Can you recommend someone else we could contact that knows the stream? ☒ Yes ☐ No  
If yes, that person's contact info (name, address, phone, directions?) \_\_\_\_\_

DCK YORK

If no, thank the individual for taking the time to talk to you and conclude the interview.

#### VI. Additional Comments

1.) From the Interviewee: \_\_\_\_\_

2.) From the Interviewer: \_\_\_\_\_

#### VII. Information on Interviewer

Has interviewer been trained by Missouri DNR to conduct UAA Interviews?

☐ Yes ☐ No If yes, how (check all that apply):

Workshop? (if so, enter date): \_\_\_\_\_

On-line training seminar? \_\_\_\_\_

Followed Interview Instruction Sheets? \_\_\_\_\_

Other \_\_\_\_\_

#### Interviewer Information:

Signature: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Employer (where applicable): \_\_\_\_\_

Interviewer's phone #: \_\_\_\_\_ E-mail: \_\_\_\_\_

**Field Data Sheet for Recreational Use Stream Survey**

**Data Sheet D—Recreational Use Interview**

**Stream Name** ELM BRANCH (**WBID #** 1283)

**I. Introduction**

**Date & Time** (include AM or PM): \_\_\_\_\_

**Interviewed:** ☐ In person ☐ By phone ☐ By mail

(NOTE: If you are an Interviewee filling out this form to mail back to DNR, proceed to Question #1.)

**Interviewee selected because** (e.g., house next to stream; standing by stream, etc.) \_\_\_\_\_

**Interviewer introduction to Interviewee:** "My name is \_\_\_\_\_, I work for \_\_ (name of your employer) \_\_, and I am collecting information on how people use \_\_ (name of the stream) \_\_."

**ASK:**

1.) Are you willing to respond to a survey about this stream? (It will just take a few minutes.)

☐ Yes ☐ No

If yes, list contact information for the interviewee below:

Legal name: DICK YORK (Loretta)

Current mailing address: 1099 NE 1301 Rd, WINDSOR 65360

Daytime phone number: (660) 647-3783

E-mail address (optional): \_\_\_\_\_

2.a.) Do you live in this area? ☒ Yes ☐ No

If yes, how many years? \_\_\_\_\_

2.b.) If you don't live nearby, are you still familiar with this stream? ☐ Yes ☐ No

If yes, how many years? \_\_\_\_\_

If no, thank the individual for taking the time to talk to you and conclude the interview.

3.) Are you familiar with this particular stretch of the stream? (show them the map, pointing out local landmarks such as roads, bridges, property lines) ☐ Yes ☐ No

If yes, proceed to "II. Personal Use?".

If no, proceed to Section V.

**II. Personal Use?**

1.) Have you or your family personally used the stream for recreation since November 28, 1975?

☐ Yes ☐ No

If yes, proceed to #3.

If no, proceed to #2.

2.a.) List reasons stream not used.

2.b.) Proceed to "III. Witnessed Use?".

3.) How do you use the stream?

**Whole Body Contact Recreation**

Swimming ☐      Tubing ☐      Snorkeling/Skin Diving ☐      Water Skiing ☐

**If Interviewee (or family) used the stream for WBCR since Nov. 28, 1975, ask:**

4.a.) When (e.g., year(s)?; season?; only after a rain?) and how often (times/year)? \_\_\_\_\_

4.b.) Where, exactly? Describe specific location *and mark on the map* (See map requirements in the protocol). \_\_\_\_\_

**Secondary Contact Recreation**

Fishing ☐      Wading ☐      Boating ☐      Trapping ☐      Other: ☐ List: \_\_\_\_\_

**If Interviewee (or family) used the stream for SCR since Nov. 28, 1975, ask:**

4.c.) When (e.g., year(s)?; season?; only after a rain?) and how often (times/year)? \_\_\_\_\_

4.d.) Where, exactly? Describe specific location *and mark on the map* (See map requirements in the protocol). \_\_\_\_\_

**III. Witnessed Use?**

1.) Have you observed others using this stream for recreation since Nov. 28, 1975? ☐ Yes ☐ No

If yes, proceed to #2.

If no, proceed to, "TV. Anecdotal Use?".

2.) What kinds of uses have you witnessed?

**Whole Body Contact Recreation**

Swimming ☐      Tubing ☐      Snorkeling/Skin Diving ☐      Water Skiing ☐

**If Interviewee witnessed WBCR use since Nov. 28, 1975, ask the following questions:**

2.a.) When (e.g., year(s)?; season?; only after a rain?) and how often (times/year)? \_\_\_\_\_

2.b.) Where, exactly? Describe specific location *and mark on the map* (Seemap requirements in the protocol). \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Secondary Contact Recreation**

Fishing ☐ Wading ☐ Boating ☐ Trapping ☐ Other: ☐ List: \_\_\_\_\_

If Interviewee witnessed SCR use since Nov. 28, 1975, ask the following questions:

2.c.) When (e.g., year(s)?; season?; only after a rain?) and how often (times/year)? \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2.d.) Where, exactly? Describe specific location *and mark on the map* (Seemap requirements in the protocol). \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**IV. Anecdotal Use?**

1.) Have you heard about anyone using this stream since Nov. 28, 1975 for recreation – not seen or done yourself, but just heard about it? ☐ Yes ☐ No

If yes, proceed to #2.

If no, thank the individual for taking the time to talk to you and conclude the interview.

2.) What kind of uses have you heard about?

**Whole Body Contact Recreation**

Swimming ☐ Tubing ☐ Snorkeling/Skin Diving ☐ Water Skiing ☐

If Interviewee heard of WBCR use since Nov. 28, 1975, ask the following questions:

2.a.) When did these uses take place (e.g., year(s)?; season?; only after a rain?) and how often (times/year)? \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2.b.) Where, exactly? Describe specific location *and mark on the map* (See map requirements in the protocol). \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### Secondary Contact Recreation

Fishing ☐ Wading ☐ Boating ☐ Trapping ☐ Other: ☐ List:

If Interviewee heard of SCR use since Nov. 28, 1975, ask the following questions:

2.c.) When did these uses take place (e.g., year(s)?; season?; only after a rain?) and how often (times/year)? \_\_\_\_\_

2.d.) Where, exactly? Describe specific location *and mark on the* (See map requirements in the protocol). \_\_\_\_\_

#### V. Others to Contact?

Can you recommend someone else we could contact that knows the stream? ☐ Yes ☐ No  
If yes, that person's contact info (name, address, phone, directions?) \_\_\_\_\_

If no, thank the individual for taking the time to talk to you and conclude the interview.

#### VI. Additional Comments

1.) From the Interviewee: \_\_\_\_\_

2.) From the Interviewer: \_\_\_\_\_

#### VII. Information on Interviewer

Has interviewer been trained by Missouri DNR to conduct UAA Interviews?

☐ Yes ☐ No If yes, how (check all that apply):

Workshop? (if so, enter date): \_\_\_\_\_

On-line training seminar? \_\_\_\_\_

Followed Interview Instruction Sheets? \_\_\_\_\_

Other \_\_\_\_\_

Interviewer Information:

Signature: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Employer (where applicable): \_\_\_\_\_

Interviewer's phone #: \_\_\_\_\_ E-mail: \_\_\_\_\_